

ABSTRACT OF THE DISCLOSURE

This invention provides a hetero-junction bipolar transistor with a new structure that prevent the corrector resistance from increasing as shrinking the size of the transistor. The bipolar transistor according to the invention comprises a substrate 2, a collector layer 6a, a base layer 10a and an emitter layer 12a. The collector layer 6a is formed on a first region of the substrate. The base layer 10a is formed on a second region of the substrate and has band gap energy smaller than that of the collector layer 6a and that of the emitter layer 12a. The plan shape of the first region is substantially same as that of the second region.